



Requirements Traceability Matrix Template Description

Requirement traceability is a technique used to provide relationships between requirements, design, and implementation of a system in order to manage the effect of change and ensure the success of the delivered system(s).

Requirement traceability, as defined by Gotel, is the ability to describe and follow the life of a requirement in both a forward and backward direction. That is, from its origins through its development and specification, to its subsequent deployment and use, and through periods of ongoing refinement and iteration in any of these phases. It can be achieved by using one or more of the following techniques:

- *Cross Referencing*. This involves embedding phrases like “see section x” throughout the project documentation (e.g. tagging, numbering, or indexing of requirements and specialized tables or matrices that track the cross references)
- *Specialized Templates and Integration of Transformation Documents*. These are used to store links between documents created in different phases of development.
- *Restructuring*. The documentation is restructured in terms of an underlying network or graph to keep track of requirements changes (e.g. assumption-based truth maintenance networks, chaining mechanisms, constraint networks and propagation)

Purpose

Requirement traceability matrices are used to map:

- high level requirements to low level requirements
- low level requirements to design descriptions
- low level requirements to source code specifications
- low level requirements to unit test cases
- low level requirements to acceptance cases
- low level requirements to all test results
- design descriptions to source code specifications
- design descriptions to acceptance test cases
- design descriptions to all test results

Method

SFA will use the Rational Rose tool sets to build requirements and traceability matrices. When Rational Rose is not used the template provided below will be used as an alternative.



Business Case

Within the Business Case document specific requirements can be identified and numerated. These requirements are the basis for developing all other requirements and must be traceable forward and backward from the Functional Requirements through the Acceptance Test Cases. Business Case requirements are extremely high level in concept and scope.

Functional Requirements

There may be one or more business case requirement that translate into many functional requirements. These requirements shall be enumerated and recorded. These requirements are the bases for developing all other requirements and test cases and must be traceable forward from the Detail Requirements through the Acceptance Test Cases and backward to the Business Case Requirements. Functional Requirements define the scope of a project and set the stage for developing the detail requirements.

Detail Requirements

For each Functional Requirement there shall be one or more detail requirement. These requirements shall be enumerated and recorded. These requirements are the bases for developing Software (SW) Requirements and test cases and must be traceable forward from the Software Requirements through the Acceptance Test Cases and backward through the Functional Requirements to the Business Case Requirements. Detail Requirements further define the scope of a project at the lowest level. Detail Requirements are discrete and indivisible. Detail Requirements may translate into business processes or software requirements.

Software Requirements

Software requirements are a direct result of the detail requirements. Detail requirements that translate into software requirements shall be enumerated and recorded. These requirements are the basis for developing software solutions that meet the functional and business case requirements. These requirements shall be enumerated and recorded. They must be traceable forward from the Unit Test Cases through the Acceptance Test Cases and backward through the Detail Requirements and the Functional Requirements to the Business Case Requirements



Requirements Traceability Matrix Template

IPT Name:		
Deliverable Name: Requirements Traceability Matrix Template		Date Completed:
Contact Information		
	Name	Channel Unit
IPT Sponsor		
Channel Task Manager		
CIO Task Manager		
Contractor Task Manager		
Task Order Number:		

Business Case Requirements

Req#	Requirement Name	Funct. Req. #	Detail Req. #	SW Req. #	UT Case #	Int. Test Case #	Accept. Test Case #

Functional Requirements

Req#	Requirement Name	Business Case #	Detail Req. #	SW Req. #	UT Case #	Int. Test Case #	Accept. Test Case #



**Department of Education
Student Financial Assistance**

Detail Requirements

Req#	Requirement Name	Business Case #	Funct. Req. #	SW Req. #	UT Case #	Int. Test Case #	Accept. Test Case #

Software Requirements

Req#	Requirement Name	Business Case #	Funct. Req. #	Detail Req. #	UT Case #	Int. Test Case #	Accept. Test Case #